

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/623,750	LOWE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ankur Gogia	2187	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/15/05.
2. ☒ The allowed claim(s) is/are 1-5, 7-9, 11 and 12.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                  |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date <u>12012005</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment  |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance                         |
|   | 9. <input type="checkbox"/> Other _____.   |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Daniel K. Nichols (#29,420) on 1 December 2005.

The application has been amended as follows:

With respect to independent claim 1, delete "A method of managing storage of at least one item" in line 1. Insert --;-- in line 1. Beginning at line 1, insert:

--A method of managing storage of at least one item--.

With respect to independent claim 7, delete "a decision engine" in line 7. Insert --;-- in line 7. Beginning at line 7, insert:

--a plurality of decision engines--.

With respect to independent claim 7, delete "the" in line 7. Insert --;-- after "engines," in line 7. Beginning at line 7, insert:

--each--.

With respect to independent claim 7, delete "the" in line 8. Insert --;-- after "module," in line 8. Beginning at line 8, insert:

--each--.

With respect to independent claim 7, delete "the" in line 10. Insert --;-- after "wherein" in line 10. Beginning at line 10, insert:

--each--.

With respect to independent claim 7, delete "the" in line 13. Insert --;-- after "to" in line 13. Beginning at line 13, insert:

--each--.

With respect to claim 11, delete "the decision engine" in line 1. Insert --;-- after "wherein" in line 1. Beginning at line 1, insert:

--one of the plurality of decision engines--.

With respect to claim 12, delete "the decision engine is" in line 1. Insert --;-- after "wherein" in line 1. Beginning at line 1, insert:

--the plurality of decision engines includes a separate decision engine--.

### ***Allowable Subject Matter***

2. Claims 1-5, 7-9, and 11-12, now renumbered 1-5, 6-8, and 9-10, respectively, are allowed.

3. The examiner's reasons for allowance is the combination with the inclusion in the above claims that deadlock between storage assignments be avoided, where deadlock is defined as the continuous shuffling back and forth of an item due to conflicting storage assignments (pg. 27, lines 19-30 of the specification). The prior art of record teaches thrashing as the state of a virtual memory system that is spending most of the time swapping pages in and out of memory. This differs from deadlock as defined in the instant application in that thrashing does not involve several processes running in parallel on independent storage devices, rather the storage devices are dependent.

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
4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ankur Gogia whose telephone number is 571-272-4166. The examiner can normally be reached on M-F 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on 571-272-4201. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ankur Gogia  
Examiner  
Art Unit 2187

  
CHRISTIAN CHACE  
PRIMARY EXAMINER

12/1/2005